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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,375	05/10/2005	Yuman Fong	08582/014002	5371

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EXAMINER	
HAMA, JOANNE	
ART UNIT	PAPER NUMBER
1632	

NOTIFICATION DATE	DELIVERY MODE
11/24/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentadministrator@clarkelbing.com

Office Action Summary	Application No.	Applicant(s)	
	10/505,375	FONG ET AL.	
	Examiner	Art Unit	
	JOANNE HAMA	1632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-13 and 28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-13 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/9/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant filed a response to the Non-Final Action of May 13, 2009 on August 13, 2009. No amendments to the claims have been filed. As such, the instant Office Action will apply to the claims filed November 2, 2007.

Claims 2, 14, 15-27 are cancelled.

Claims 1, 3-13, 28, drawn to a method of treating metastasis of cancer, are under consideration.

Maintained Rejection

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-9, 28 remain rejected under 35 U.S.C. 102(b) as being anticipated by McAuliffe et al., 2000, J. Gastrointest. Surg. 4: 580-588, as evidenced by Alemany et al., US Patent 6,403,370, patented June 11, 2002, for reasons of record, May 13, 2009.

Applicant's arguments filed August 13, 2009 have been fully considered but they are not persuasive.

Applicant indicates that McAuliffe and Alemany, when discussing the treatment of distal tumors, use the systemic immune response to kill cancer cells. This effect is described in more detail by Todo et al., 1999, copy provided, who use a flank mouse model system to subcutaneously inject G207 and describe regression of a remote established tumor in the brain or in the periphery. A strong example of this systemic effect is mediated by the immune response. This systemic effect is a completely different effect as compared to one of the present invention, wherein the injected virus spreads directly to and acts at distal sites (Applicant's emphasis, Applicant's response, page 3-4). In response, this is not persuasive. The claims require method steps of administering herpes virus to a resected tumor bed in a patient with metastatic cancer. Regardless of what Applicant indicates to be the mechanism to be to treat metastatic cancer, at the time of filing, McAullife et al. provide guidance for administering virus to a tumor bed to a patient with metastatic cancer. Again, where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. See In re Ludtke 441 F.2d 660, 169 USPQ 563 (CCPA 1971). Whether the rejection is based on "inherency" under 35 USC 102, or "prima facie obviousness" under 35 USC 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and

compare prior art products. In re Best, Bolton, and Shaw, 195 USPQ 430, 433 (CCPA 1977) citing In re Brown, 59 CCPA 1036, 459 F.2d 531, 173 USPQ 685 (1972).

Applicant indicates that Alemany surgically debulks the tumor, which in the art means that this is surgical removal of part of a tumor. Alemany teaches away from the instant invention in which a tumor is resected for treatment of metastases of cancer. The systemic effect of Alemany requires virus replication at the site of injection into tumor cells to stimulate the immune system to act against metastatic cancer elsewhere. In the instant invention, such systemic immune response it not obtained as the whole tumor is resected, not debulked, prior to application of the virus (Applicant's response, page 4). In response, this is not persuasive. First, with regard to Applicant indicating Alemany teaching of part of the tumor, the claims are not limited to partial or entire resection of a tumor. Second, it is noted that McAulliffe et al. teach resection of a tumor (McAullife et al., page 586, 1st col., 4th parag.). Third, while Applicant indicates that Alemany et al. teach away, it is noted that the instant rejection is a 102, not a 103 rejection. Alemany et al. was provided to illustrate that at the time of filing, it was known that viral administration to a tumor bed could be used to treat metastases in cancer patients. Fourth, while Applicant indicates that the instant invention uses a different mechanism to treat metastases, the mechanism of how metastasis is treated is irrelevant. Because McAullife et al. teach the method steps of the claims, McAullife et al. anticipate the claimed invention.

Applicant indicates that on page 586, last parag. McAullife names several implications of the study for potential clinical applications of oncolytic HSV not including

treatment of metastases. In response, this is not persuasive. As indicated above and in the Office Action, May 13, 2009, page 4, given that the art was aware of using virus in tumor beds to treat metastases, an artisan would know that McAullife et al.'s teaching would include the treatment of patients with metastatic cancer.

Thus, the claims remain rejected.

Claims 1, 3-6, 8-13, 28 remain rejected under 35 U.S.C. 102(e) as being anticipated by Fong et al., US 2002/0071832 for reasons of record, December 28, 2005, July 7, 2006, February 12, 2007, July 14, 2007, January 11, 2008, August 20, 2008, May 13, 2009.

Applicant's arguments filed August 13, 2009 have been fully considered but they are not persuasive.

In response to Applicant's prior submission that the inclusion of the mts1 promoter in a long list of promoters does not indicate that Fong envisioned treatment according to the present invention, as well as Fong's own statement to this effect in a declaration, the Examiner responded that nothing in the Fong reference specifically indicates a limitation on the type of cancer that is treated (i.e., that metastasis is excluded). Further, the Examiner refers to Alemany as teaching that it was known in the art that oncolytic viruses can be used in the treatment of cancer because lysis of cancer cells leads to a systemic immune response. Based on this, the Examiner concludes that an artisan would have recognized that the Fong reference has applications in metastatic cancer treatment. Applicant disagrees because the induction

of a systemic immune response, as taught by Alemany, is, as discussed above, completely different from the mechanism of the instant invention. Further, Applicant submits that in the view of Fong, as stated in the above-mentioned declaration should be given substantial weight in the determination of this matter, as Fong is the most likely person most familiar with this work and is an expert in the field (Applicant's response, page 6). In response, this is not persuasive. With regard to Applicant indicating that Fong's statement in the declaration filed February 20, 2009 that Fong was not envisioning the treatment of metastatic cancer in US 2002/0071832, should be given patentable weight, the Examiner has considered Fong's statement. While it may be that Fong did not intend the method in US 2002/0071832 to treat metastatic cancer, the 102 is considered in light of what was known at the time of filing, even despite Fong believing that the method described in US 2002/0071832 was specifically not for metastatic cancer treatment. Artisans at the time of filing (e.g. Alemany et al.) were aware that viruses can be used to treat metastatic cancer and would have known that Fong et al., US 2002/0071832 can also be used to treat metastatic cancer. As such, Fong et al.'s treatment would have encompassed treatment of metastatic cancer, even if Fong et al. did not implicitly intend the method disclosed in US 2002/0071832 to treat metastatic cancer.

With regard to the Examiner's response that it is known that the first metastatic cancer detected in cancer patients is in the lymph nodes and reiterates that Alemany teaches administration to the resected tumor beds can be used to lyse cancer cells in the bed and such lysed cancer cells can be used to induce a systemic immune

response that can treat metastatic cancer, Applicant indicates that the cited reference from the Zetter laboratory states that "many" and not all, metastases first detected in cancer patients are identified in the lymph nodes. Thus, it is not true that any patient with metastatic cancer "necessarily" has lymphatic metastases, as indicated by the Examiner (Applicant's response, page 6). In response, this is not persuasive. According to the National Cancer Institute, artisans use staging to describe the extent or severity of an individual's cancer based on the extent of the original (primary) tumor and the extent of spread in the body. Artisans commonly use the TNM system to determine the extent of the tumor (T), the extent of spread to the lymph nodes (N), and the presence of metastasis (M). A number is added to each letter to indicate the size or extent of the tumor and the extent of spread. The art characterizes stage III cancers as having spread to the nearby lymph nodes and/or organs adjacent to the primary tumor. In stage IV of cancer, the cancer has spread to other organs (see NCI printout; National Cancer Institute [online], 2004 [retrieved on 2009-11-17]. Retrieved from the Internet:< URL: http://www.cancer.gov/cancertopics/factsheet/Detection/staging>, pages 1-5, pages 2-3, point 4). Further, the art recognizes that the TNM system is commonly used for solid tumors, including those of breast, cervical and ovarian, colon, kidney, larynx, lung, melanoma, prostate, non-melanoma skin cancer, and bladder cancer. Given this teaching, an artisan recognizes that identifying the presence of cancer in lymph nodes is routine in the art for determining the stage of cancer in a patient and that an artisan would recognize that metastasis in the lymph nodes, but not in distal organs is a less severe form of in a cancer patient. While it is true that

Applicant points out that not all patients necessarily will exhibit metastasis in lymph nodes, the art recognizes that it is a common characteristic in cancer patients of stage III disease, such it is a standard indicator of cancer progression.

Applicant indicates that as discussed above, the present invention pertains to the treatment of metastases with administered virus, and not by induction of systemic immunity as taught by Alemany. Further, as stated above, the interpretation of Fong by Fong himself should be given substantial weight in consideration of this case (Applicant's response, page 7). In response, as discussed above, this is not persuasive. With regard to Applicant indicating that the instant invention pertains to administration of metastases with administered virus and not to the induction of systemic immunity, the Examiner has indicated that Fong et al. teach the method steps regardless of what actual mechanism occurs to treat metastatic cancer. Alemany et al. was provided to teach that at the time of filing, treatment of metastatic cancer by administering oncolytic virus (in Alemany et al.'s case, adenovirus) was known and given this teaching, an artisan would have realized that using oncolytic virus was a way of treating metastatic cancers in Fong et al.'s teaching. While Fong indicates in the declaration of February 20, 2009 that there was no intention in the US 2002/0071832 publication of treating metastasis, this does not overcome the rejection at hand because artisans, for example Alemany et al., were aware that oncolytic viruses applied to resected tumor beds can be used to treat metastatic cancers.

Thus, the claims remain rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 6, 7 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Fong et al., US 2002/0071832 in view of Wong et al., 2001, Human Gene Therapy, 12: 253-265, for reasons of record, December 28, 2005, July 7, 2006, February 12, 2007, July 24, 2007, January 11, 2008, August 20, 2008, May 13, 2009.

Applicant has provided no response regarding this rejection. As such, the rejection remains.

Claims 1, 3-13, 28 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Alemany et al., US Patent 6,403,370, patented June 11, 2002, in view of McAuliffe et al., 2000, J. Gastrointest. Surg. 4: 580-588, for reasons of record, May 13, 2009.

Applicant has provided no response regarding this rejection. As such, the rejection remains.

Conclusion

No claims allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joanne Hama, Ph.D. whose telephone number is 571-272-2911. The examiner can normally be reached Mondays, Tuesdays, Thursdays, and Fridays from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Paras, can be reached on 571-272-4517. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance.

Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

/Joanne Hama/
Primary Examiner
Art Unit 1632